

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 1, 3, 5, 6, 9, 10, 11, 12, 14-16, 19, 21-23 and 40 and CANCEL claims 35 and 36 without prejudice or disclaimer in accordance with the following:

1. (currently amended) A weight detecting device for a microwave oven, comprising:

a weight detecting unit comprising a weight sensor supported at an end thereof, and detecting a weight according to an external force applied to a free end thereof; and a support unit to support the weight detecting unit.

2. (original) The weight detecting device according to claim 1, wherein the support unit supports the weight detecting unit at a position spaced apart from a top plate of an interior casing of the microwave oven by a predetermined height.

3. (currently amended) ~~The~~ A weight detecting device ~~according to claim 2 for a microwave oven, comprising:~~

a weight detecting unit supported at an end thereof, and detecting a weight according to a force applied to a free end thereof; and

a support unit which supports the weight detecting unit at a position spaced apart from a top plate of an interior casing of the microwave oven by a predetermined height, wherein the support unit is mounted to the top plate of the interior casing.

4. (original) The weight detecting device according to claim 1, further comprising a food seating unit, wherein the weight detecting unit detects the weight according to an external force generated by food placed on the food seating unit, the food seating unit being provided on a top plate of an exterior casing of the microwave oven.

5. (currently amended) ~~The~~ A weight detecting device ~~according to claim 4 for~~

a microwave oven, comprising:

a weight detecting unit supported at an end thereof and detecting a weight according to an external force applied to a free end thereof;

a support unit to support the weight detecting unit; and

a ~~wherein the food seating unit comprises~~comprising:

a tray bracket integrated with ~~the a~~ top plate of ~~the an~~ exterior casing of the microwave oven;

a rubber packing mounted to the tray bracket; and

a locking ring to lock the rubber packing to the tray bracket,

wherein the weight detecting unit detects the weight according to the external force generated by food placed on the food seating unit, the food seating unit being provided on the top plate of the exterior casing of the microwave oven.

6. (currently amended) The weight detecting device according to claim 1, wherein the weight detecting unit further comprises:

~~a the weight sensor having a predetermined length, supported at an end thereof by the support unit, and detecting the weight according to an external force applied to a free end thereof; and~~

a force transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor.

7. (original) The weight detecting device according to claim 6, wherein the weight sensor is provided with at least one heat dissipating hole.

8. (original) The weight detecting device according to claim 6, wherein the force transmitting unit comprises:

a support plate having a predetermined area; and

a rod, provided adjacent to the support plate, to concentrate the force applied to the support plate on the free end of the weight sensor.

9. (currently amended) A weight detecting device with a support unit for a microwave oven, comprising:

~~a weight detecting unit comprising~~sensor formed of a beam fixed at one end

thereof to the support unit, to detect a weight placed on a free end of the beam based on a deflection of the beam.

10. (currently amended) A weight detecting device for a microwave oven, comprising:

a weight ~~detecting unit comprising~~sensor formed of a cantilever beam for which a displacement of a free end thereof is substantially resistant to temperature variation so as to detect a weight placed on the free end of the cantilever beam based on the displacement of the free end thereof.

11. (currently amended) A weight detecting device for a microwave oven, comprising:

a weight ~~detecting unit comprising~~sensor formed of a cantilever beam for which a displacement of a free end thereof is substantially resistant to temperature variation, and detecting a weight according to a force applied to the free end of the cantilever beam causing the displacement of the free end of the cantilever beam.

12. (currently amended) A weight detecting device with a support unit for a microwave oven, comprising:

a weight ~~detecting unit~~sensor supported at an end thereof by the support unit, and detecting a weight according to a force applied to a free end thereof.

13. (original) The weight detecting device according to claim 12, wherein the support unit supports the weight detecting unit at a position spaced apart from a top plate of an interior casing of the microwave oven by a predetermined height.

14. (currently amended) ~~The A weight detecting device according to claim 13 with a support unit for a microwave oven, comprising:~~

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to a force applied to a free end thereof, wherein the support unit supports the weight detecting unit at a position spaced apart from a top plate of an interior casing of the microwave oven by a predetermined height, and the support unit is mounted to the top plate of the interior casing.

15. (currently amended) The weight detecting device according to claim 12, further comprising a food seating unit to transmit to ~~transmit to~~ the weight detecting unit an external force generated by the food placed on the food seating unit, the food seating unit being provided on a top of the microwave oven.

16. (currently amended) ~~The A~~ weight detecting device ~~according to claim 15~~ with a support unit for a microwave oven, comprising:

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to a force applied to a free end thereof; and

a, wherein the food seating unit comprises:

a tray bracket integrated with the top of the microwave oven;

a rubber packing mounted to the tray bracket; and

a locking ring locking the rubber packing to the tray bracket,

wherein the food seating unit transmits to the weight detecting unit an external force generated by the food placed on the food seating unit, and the food seating unit is provided on a top of the microwave.

17. (original) The weight detecting device according to claim 12, wherein the weight detecting unit comprises:

a weight sensor having a predetermined length, supported at a fixed end thereof by the support unit, and detecting the weight according to an external force applied to a free end thereof; and

a transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor.

18. (original) The weight detecting device according to claim 17, wherein the transmitting unit comprises:

a shaft positioned perpendicular to the free end of the weight sensor to transmit the external force applied to a food seating unit to the free end of the weight sensor.

19. (currently amended) ~~The A~~ weight detecting device ~~according to claim 18~~ with a support unit for a microwave oven, comprising:

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to an external force applied to a free end thereof, the weight detecting unit comprising

a ~~wherein the~~ weight sensor of a predetermined length, supported at a fixed end thereof by the support unit, and detecting the weight according to the external force applied at a free end thereof and ~~comprises~~ comprising:

a beam supported by the support unit ~~and communicating with the shaft of the transmitting unit;~~ and

one or more heat dissipating holes formed in the beam at a predetermined portion of the beam so as to allow the beam to bend in response to the external force applied to the free end of the weight sensor and to dissipate heat generated by the microwave oven; and

a transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor and comprising a shaft positioned perpendicular to the free end of the weight sensor to transmit the external force applied to a food seating unit to the free end of the weight sensor, wherein the beam of the weight sensor communicates with the shaft of the transmitting unit.

20. (original) The weight detecting device according to claim 17, wherein the transmitting unit comprises:

a support plate; and

a rod, positioned between the support plate and the weight sensor, to concentrate the external force applied to the support plate onto the free end of the weight sensor.

21. (currently amended) ~~The~~ A weight detecting device according to claim 19, with a support unit for a microwave oven, comprising:

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to an external force applied to a free end thereof, the weight detecting unit comprising

a weight sensor of a predetermined length, supported at a fixed end thereof by the support unit, and detecting the weight according to the external force applied at a free end thereof and comprising

a beam supported by the support unit,

one or more heat dissipating holes formed in the beam at a predetermined portion of the beam so as to allow the beam to bend in response to the external force applied to the free end of the weight sensor and to dissipate heat generated by the microwave oven, and

~~wherein the weight sensor further comprises:~~upper and lower sensing elements provided on each of upper and lower surfaces of a central portion of the beam of the weight sensor, respectively, such that a variation, according to a displacement of the beam of the weight sensor, in the internal resistance of the upper and lower sensing elements is detected;
and

a transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor and comprising a shaft positioned perpendicular to the free end of the weight sensor to transmit the external force applied to a food seating unit to the free end of the weight sensor, wherein the beam of the weight sensor communicates with the shaft of the transmitting unit.

22. (currently amended) ~~The A~~ weight detecting device ~~according to claim 19,~~
with a support unit for a microwave oven, comprising:

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to an external force applied to a free end thereof, the weight detecting unit comprising

a weight sensor of a predetermined length, supported at a fixed end thereof by the support unit, and detecting the weight according to the external force applied at a free end thereof and comprising

a beam supported by the support unit,

one or more heat dissipating holes formed in the beam at a predetermined portion of the beam so as to allow the beam to bend in response to the external force applied to the free end of the weight sensor and to dissipate heat generated by the microwave oven, and

upper and lower sensing elements provided on each of upper and lower surfaces of a central portion of the beam of the weight sensor, respectively, such that a variation, according to a displacement of the beam

of the weight sensor, in the internal resistance of the upper and lower sensing elements is detected; and

a transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor and comprising a shaft positioned perpendicular to the free end of the weight sensor to transmit the external force applied to a food seating unit to the free end of the weight sensor, wherein the beam of the weight sensor communicates with the shaft of the transmitting unit,

wherein, when the weight sensor is bent in response to ~~the~~ a load applied to the free end of the weight sensor, the upper surface of the beam of the weight sensor having the upper sensing element expands while the lower surface of the beam of the weight sensor having the lower sensing element contracts to change an internal resistance of the upper and low sensing elements.

23. (currently amended) ~~The~~ A weight detecting device ~~according to claim 10,~~ with a support unit for a microwave oven, comprising:

a weight detecting unit supported at an end thereof by the support unit, and detecting a weight according to an external force applied to a free end thereof, the weight detecting unit comprising

a weight sensor of a predetermined length, supported at a fixed end thereof by the support unit, and detecting the weight according to the external force applied at a free end thereof and comprising

a beam supported by the support unit, and
one or more heat dissipating holes formed in the beam at a
predetermined portion of the beam so as to allow the beam to bend in
response to the external force applied to the free end of the weight sensor
and to dissipate heat generated by the microwave oven; and

a transmitting unit mounted to the free end of the weight sensor so as to transmit the external force to the free end of the weight sensor and comprising a shaft positioned perpendicular to the free end of the weight sensor to transmit the external force applied to a food seating unit to the free end of the weight sensor,

wherein the beam of the weight sensor communicates with the shaft of the transmitting unit ~~wherein and~~ the weight sensor is made of an elastic material to bend by the external force applied to the shaft.

24. (original) A microwave oven comprising:
an interior casing disposed therein with a top plate thereof;
a support unit; and
a weight detecting unit supported on the interior casing at a fixed end of the weight detecting unit by the support unit, and detecting a weight according to a force applied to a free end of the weight detecting unit.

25. (original) The microwave oven according to claim 24, wherein the support unit supports the weight detecting unit at a position spaced apart from the top plate of the interior casing by a predetermined height.

26. (original) The microwave oven according to claim 25, wherein the support unit is mounted to the top plate of the interior casing.

27. (original) The microwave oven according to claim 24, further comprising:
an exterior casing with a top plate thereof; and
a weight detecting device comprising a food seating unit to transmit to the weight detecting unit an external force generated by food placed on the food seating unit, the food seating unit being provided on the top plate of the exterior casing.

28. (original) The microwave oven according to claim 27, wherein the food seating unit comprises:

a tray bracket integrated with the top plate of the exterior casing;
a rubber packing mounted to the tray bracket; and
a locking ring to lock the rubber packing to the tray bracket.

29. (original) The microwave oven according to claim 24, wherein the weight detecting unit comprises;

a weight sensor having a length, supported at a fixed end thereof by the support unit, and detecting the weight according to an external force applied to a free end thereof; and

a transmitting unit mounted to the free end of the weight sensor so as to transmit

the external force to the free end of the weight sensor.

30. (original) The weight detecting device according to claim 29, wherein the weight sensor comprises:

a beam supported by the support unit and communicating with the shaft of the transmitting unit; and

one or more heat dissipating holes formed in the beam at a predetermined portion of the beam so as to allow the beam to bend in response to the external force applied to the free end of the weight sensor and to dissipate heat generated by the microwave oven.

31. (original) The microwave oven according to claim 29, wherein the transmitting unit comprises:

a support plate; and

a rod, positioned between the support plate and the weight sensor, to concentrate the external force applied to the support plate onto the free end of the weight sensor.

32. (original) The microwave oven according to claim 29, wherein the weight sensor comprises:

upper and lower sensing elements provided on each of upper and lower surfaces of a central portion of the beam of the weight sensor, respectively, such that a variation, according to a displacement of the beam of the weight sensor, in the internal resistance of the upper and lower sensing elements is detected.

33. (original) The microwave oven according to claim 30, wherein, when the weight sensor is bent in response to the load applied to the free end of the weight sensor, the upper surface of the beam of the weight sensor having the upper sensing element expands while the lower surface of the beam of the weight sensor having the lower sensing element contracts to change an internal resistance of the upper and low sensing elements.

34. (original) The microwave oven according to claim 30, wherein the weight sensor is made of an elastic material to bend by the external force applied to the shaft.

35. (cancelled)

36. (cancelled)

37. (original) A microwave oven, comprising:

an interior casing disposed therein with a top plate thereof;

a support unit; and

a weight detecting unit with a beam thereof, supported on the interior casing at a fixed end of the weight detecting unit by the support unit, to detect a weight placed on a free end of the beam based on a deflection of the beam.

38. (original) A microwave oven, comprising:

an interior casing disposed therein with a top plate thereof;

a support unit; and

a weight detecting unit with a cantilever beam, supported on the interior casing at a fixed end of the weight detecting unit by the support unit, for which a displacement of a free end thereof is substantially resistant to temperature variation so as to detect a weight placed on the free end of the cantilever beam based on the displacement of the free end thereof.

39. (original) A microwave oven, comprising:

an interior casing disposed therein with a top plate thereof;

a support unit; and

a weight detecting unit with a cantilever beam, supported on the interior casing at a fixed end of the weight detecting unit by the support unit, for which a displacement of a free end thereof is substantially resistant to temperature variation , and detecting a weight according to a force applied to the free end of the cantilever beam causing the displacement of the free end of the cantilever beam.

40. (currently amended) A microwave oven, comprising:

an interior casing disposed therein with a top plate thereof;

a support unit mounted on the top plate; and

a weight detecting unit only a part of which is supported by the support unit to

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allow displacement thereof and to reduce a space to install the weight detecting unit.